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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/629,044	07/31/2000	Clare Chu	50325-0141	4734

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EXAMINER

HA, YVONNE QUY M

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/629,044

Applicant(s)

CLARE CHU

Examiner

Yvonne Q. Ha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Oath/Declaration

It does not identify the mailing address of each inventor. A mailing address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing address should include the ZIP Code designation. The mailing address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

1. Inventor Garakani's mailing address is incomplete. Full address is required.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: figure 2A, reference 206, figure 2D, reference 262, figure 3, reference 350, drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: Co-pending application number needs an update. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 10-13, 19, 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Viswanadham et al. (US Patent 6,424,659).

Referring to claims 1, 10, and 19, Viswanadham discloses a method of determining a multilayer switching path (col. 2, lines 17-29) for a flow between a source device and a destination device in a switched network (figure 9B), the method comprising the computer-implemented steps of: determining a Layer 3 path and a Layer 2 path through the network (col. 2, lines 31-67, wire-speed routing at layers 2 and 3) from the source device to the destination device (figure 9B); selecting each route processor of the network that is in the Layer 3 path and that appears on a Layer 2 path that is associated with the source device and the destination device and that leads to and emanates from the route processor (col. 9, lines 58-67; col. 10, lines 1-67; figures 8A, 9A, L2 and L3 CAMs route cache); selecting, for each selected route processor (L3 CAM search), a switch in the network that satisfies a pre-determined set of criteria as a relevant switch engine that multilayer switches the selected route processor (col. 19, lines 41-67; col. 20, lines 1-67; figure 16A); creating and storing information that defines a multilayer switching path and that includes information identifying the source device, destination device, and each selected switch (col. 20, lines 10-13; col. 21, lines 17-42).

Referring to claims 2 and 11, Viswanadham discloses all aspects of the claimed invention and further teaches selecting the switch that satisfies the predetermined set of criteria comprises identifying one or more switches in the network that are configured as switch engines, associated with the selected route processor, and included in Layer 2 paths leading to and emanating from the selected route processor (col. 11, lines 59-63, CAM analyze incoming packets at layer-2; col.

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20, lines 10-67; col. 21, lines 17- 42, layer-3 routing based on layer 2 lookup of received packets).

Referring to claims 3 and 12, Viswanadham discloses all aspects of the claimed invention and further teaches selecting the switch that satisfies the pre- determined set of criteria as the relevant switch engine further comprises selecting from the set of switches as the relevant switch engine the switch that contains an MLS-entry (i.e. flow information) that matches the flow between the source device and the destination device when there is only one switch that contains the MLS-entry that matches the flow (col. 20, lines 10-67; col. 21, lines 17- 42).

Referring to claims 4 and 13, Viswanadham discloses all aspects of the claimed invention and further teaches selecting the switch that satisfies the pre-determined set of criteria as the relevant switch engine further comprises selecting from the set of switches as the relevant switch engine the switch that contains an MLS-entry (i.e. flow information) that matches the flow between the source device and the destination device and that is the farthest away on the Layer 2 path from the selected route processor when there is more than one switch that contains the MLS-entry that matches the flow (col. 20, lines 10-67; col. 21, lines 17- 42).

Referring to claim 20, Viswanadham discloses an apparatus for determining a multilayer switching path for a flow between a source device and a destination device in a switched network (figures 1 and 2A, reference 20), the apparatus comprising: a network interface that receives one or more messages from the network (figure 1, reference 4); one or more processors coupled to the network interface to receive the messages (figure 2A, references 10, 12, 16); a memory accessible to the one or more processors (figure 2A, references 10, 12, 16); one or more sequences of instructions stored in the memory which, when executed by the one or more

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processors (col. 4, lines 36-67, col. 5, lines 1-49; figures 3, 5), cause the one or more processors to carry out the steps of: determining a Layer 3 path and a Layer 2 path through the network from the source device to the destination device (col. 2, lines 31-67, wire-speed routing at layers 2 and 3); selecting each route processor of the network that is in the Layer 3 path and that appears on a Layer 2 path that is associated with the source device and the destination device and that leads to and emanates from the route processor (col. 9, lines 58-67; col. 10, lines 1-67; figures 8A, 9A, L2 and L3 CAMs route cache); selecting, for each selected route processor, a switch in the network that satisfies a pre-determined set of criteria as a relevant switch engine that multilayer switches the selected route processor (col. 19, lines 41-67; col. 20, lines 1-67; figure 16A); creating and storing information that defines a multilayer switching path and that includes information identifying the source device, destination device, and each selected switch (col. 20, lines 10-13; col. 21, lines 17-42).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5-9, 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viswanadham et al. (US Patent 6,424,659) in view of Stelliga (US Patent 6,625,650).

Referring to claims 5-9, 14-18, Viswanadham discloses all aspects of the claimed invention and further teaches a network management station is part of the switch system (col. 4, lines 36-44; figure 3). Viswanadham failed to teach establishing the flow between the source

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device and the destination by sending packets from any route processor that is upstream from the selected route processor to the destination device when the source device is remote. However, Stelliga discloses a protocol interaction of one host to remote host (col. 4, lines 20-28, based on OSI model); transferring of data from source to destination on different traffic types (col. 5, lines 56-63; figure 4). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Viswanadham multi-layer switching apparatus to Stelliga multilayer broadband provisioning. As defined in the OSI model of networking system, seven layers are divided in the model where each layer interacts directly with the layer immediately beneath it and provides facilities for use by the layer above it. Protocols enable an entity in one host to interact with corresponding an entity at the layer in a remote host. The teaching of Viswanadham and Stelliga wire-speed where layer 3 routing needs to be performed based on a layer-2 lookup of packets received by the switching system. Based on the OSI model, the protocol interaction from one host to a remote host

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Rodrig et al. (US Patent 6,256,314) discloses routerless layer 3 forwarding in a network
- Hoffman et al. (US Patent 6,094,435) discloses QoS in a multi-layer network element
- Hendel et al. (US Patent 6,088,356) discloses Multilayer network element
- Hendel et al. (US Patent 6,081,522) discloses Multilayer network element

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne Q. Ha whose telephone number is 703-305-8392. The examiner can normally be reached on Monday-Friday 7a.m.-4p.m. Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ajit Patel can be reached on 703-308-5347. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

YQH


Ajit Patel
Primary Examiner